

Mir memories

STS-81 crew members capture memorable moments during docking with the Russian station. Photos on Page 3.



Rodeo days

Houston Livestock Show and Rodeo volunteers entertain JSC employees and their children. Photos on Page 4.

Space News Roundup

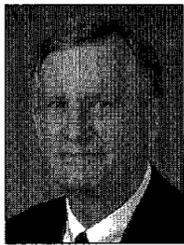
Vol. 36

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No. 5

Shannon, Thorson to split offices

The Business and Information Systems Directorate once again will become two separate directorates with Jim Shannon leading the business side and Richard Thorson heading up information systems.



Shannon

Shannon will serve as acting director of the new Business Management Directorate. As the director, Shannon will lead the center's procurement and resources functions that previously were part of the Business and Information Systems Directorate. Shannon joined JSC in 1962 and has held progressively responsible positions in the Mission Operations Directorate over his 34-year career. After holding numerous managerial positions within MOD, Shannon was appointed assistant director in 1989 and was named deputy director in 1995.



Thorson

Thorson will lead the center's information systems and information technology programs that previously were part of the Business and Information Systems Directorate. He joined JSC in 1966 and has held numerous managerial positions, including manager for Integration for Space Station Freedom; deputy manager of the National Space Transportation Systems Operations; manager of the Data Management and Operations Office and most recently, deputy director of Center Operations.



*NASA Photo KSC-97EC-0221

STS-82 crew members are all smiles as they take a break at Launch Pad 39A in front of *Discovery* during the Terminal Countdown Demonstration Test. Front row from left are, Mission Specialists Steve Smith, Greg Harbaugh and Steve Hawley. Back row from left are, Mission Specialists Joe Tanner and Mark Lee, Commander Ken Bowersox and Pilot Scott Horowitz. STS-82 will be the second Hubble Space Telescope servicing mission. Liftoff is targeted for Tuesday.

Black history artifacts needed for exhibit

In observance of Black History Month, the Equal Opportunity Programs Office will host a Black History Exhibit from 11 a.m.-1:30 p.m. Feb. 25 and 26 in the Bldg. 3 cafeteria.

JSC employees are encouraged

to submit items for display to enhance the variety and significance of African-Americans in American history.

Employees who have any items to display can contact Patricia Burke at x30606 no later than Feb. 18.

Four space walks highlight STS-82 Hubble mission

By Ed Campion

The STS-82 astronauts are to arrive at Kennedy Space Center today as *Discovery* prepares to lift off on the second servicing mission to the orbiting Hubble Space Telescope.

Commander Ken Bowersox, Pilot Scott Horowitz, and Mission Specialists Mark Lee, Greg Harbaugh, Steve Smith, Joe Tanner and Steve Hawley were to leave Ellington Field early Friday and spend the next few days in weather and mission-related meetings.

The official STS-82 countdown is to begin early Saturday at 3 a.m. CST. At the Flight Readiness Review meeting on Jan. 30, NASA managers set Feb. 11 as the official launch date for the mission. The 65-minute launch window opens at 2:56 a.m. CST Tuesday.

Work at Launch Pad 39A this week included completion of payload integration and verification tests, cooling of the Near Infrared Camera and Multi-Object Spectrometer payload and closeout of the aft compartment.

In addition to standard pre-launch processing activities this week, KSC technicians also removed and replaced the nozzle throat plugs on the solid rocket boosters. The team examining the nozzle throat erosion issue asked for the plug changeout to give engineers additional data on a batch of polysulfide material used on some recent SRBs. The polysulfide material may be a possible contributor to the unusual erosion pattern seen during two previous shuttle launches.

Assuming an on-time launch on Feb. 11, *Discovery* will rendezvous with the orbiting telescope just before 2 a.m. CST on Feb. 13. When the shuttle is within 200 feet of the telescope, ground controllers will command Hubble to perform a

roll maneuver to position it for grappling. Hawley will use the robot arm to grab the telescope and berth it in *Discovery's* cargo bay. Once the telescope is secure and power has transferred to *Discovery*, Horowitz will maneuver the shuttle so that Hubble's solar arrays face the sun and its internal batteries can recharge.

Beginning Thursday evening, the first of four space walks over four successive days will be conducted.

During the space walks, Lee, Harbaugh, Smith and Tanner will install two state-of-the-art instruments that will significantly upgrade the scientific capabilities of the telescope. They also will perform maintenance to keep Hubble functioning smoothly until the next scheduled servicing mission in 1999.

Once the space walks are complete, ground controllers will turn on Hubble's internal power and Hawley, who originally deployed Hubble on STS-31 in April 1990, will release the orbiting observatory to continue its exploration of distant galaxies.

Discovery's mission is planned for 9 days, 22 hours, 47 minutes. The second shuttle mission of the year will conclude with a landing at KSC on Feb. 21 at about 1:43 a.m. CST.

While *Discovery* is poised to begin its mission, processing work on the other shuttles supporting flight operations also continues on schedule.

Following installation of the Spacelab into *Columbia* last Friday, KSC technicians conducted integration and verification tests on the module. Securing of the three shuttle main engines also was completed. Current plans call for *Columbia* to be moved to the Vehicle Assembly Bldg. on March 3 and to be moved to the launch pad one week later. *Columbia's* seven astronauts will fly on STS-83, a 16-day microgravity sciences flight 1.



Linenger salutes Houston rodeo from Mir station

Mir 22 Flight Engineer Jerry Linenger sent his greetings to participants in the Houston Livestock Show and Rodeo last week but spent most of the week diving into his experiments on the Russian Mir Space Station and preparing for the arrival of the Mir 23 crew next week.

"Welcome everybody to the Houston Livestock and Rodeo show," Linenger said. "It is going to be a fantastic event and I wish I were down there right now to join y'all. I know that there are more than 10,000 volunteers that make the show a success and so we want to salute all those people that put in all their hard work, hard effort to make the show a success every year. And, also to those volunteers at JSC. I know a lot of folks down there also get involved in the Houston Livestock Show and Rodeo."

Linenger showed off his sheriff-in-space badge and hog socks and roped a couple of aliens as he made deputies of Commander Valery

Korzun and Flight Engineer Alexander Kaleri.

The break in activities came after a busy four weeks on Mir, but Linenger said he is making himself at home and enjoying his stay in space.

"So far it's been a great experience," Linenger said last week during an interview with WDRV in Detroit. "I have been really busy doing some great science experiments, but also having an enjoyable time getting use to a new environment. The floating and those things that most people associate with space becomes second nature around here and it feels like I am at home now. The minute I got into space I felt very comfortable physically. You just have to adjust a little bit because everything is fingertip control. You can't go bounding around or leaping or anything like that, you just basically use your fingertips and push yourself in any

Please see **MIR**, Page 4



NASA Photo STS081-E-5498

STS-81 Mission Specialist Jeff Wisoff, right, and other *Atlantis* crew members give Mir 22 Flight Engineer Jerry Linenger a special inflatable cake to celebrate his 42nd birthday before leaving him on the orbiting laboratory.

JSC workers take buyout advantage

A total of 113 employees took advantage of the latest NASA buy out program and left JSC to pursue other interests.

The following is a breakdown of JSC employees by directorate who elected to voluntarily resign, retire or take an "early out" through the buy-out program.

Human Resources Office: Richard Campbell, Curtis Collins, Valerie Michaud and Elaine Trainor.

Office of Public Affairs: Juanie Campbell, Edna Campos, Bunny Dean and Jim Poindexter.

Legal Office: Harold Dantone, Hank Flagg and John Lottinville.

Business and Information Services Directorate: Doris Adams, Bluford Brady, Jane Brandenstein, Anne Brenton, Warren Conner, Dean DesJardins, Ruth Elder, Jackie Fisher, Paula Fyffe, Patricia Kanz, Edward Kenyon, Theodore

Please see **WORKERS**, Page 4

JSC

Ticket Window

The following discount tickets are available for purchase in the Bldg. 11 Exchange Store from 10 a.m.-2 p.m. Monday-Thursday and 9 a.m.-3 p.m. Friday. For more information, call x35350 or x30990.

Carnival tickets: Houston Livestock Show and Rodeo carnival tickets. Cost is \$10.

Moody Gardens: Tickets cost \$9.50 for 2 of 3 events.

Space Center Houston: Adult \$8.95; children (4-11) \$6.40, annual membership \$25.95, family membership (up to four) \$59.95.

Movie discounts: General Cinema, \$4.75; AMC Theater, \$4.50; Sony Loew's Theater, \$4.75.

JSC logo shirts: Polo style cost \$23. T-shirt cost \$10.

Stamps: Book of 20, \$6.40.

"Orbit": The book "Orbit" by Jay Apt, Mike Helfert and Justin Wilkinson is on sale for \$28.

Metro tickets: Passes, books and single tickets available.

JSC

Gilruth Center News

Sign up policy: All classes and athletic activities are first come, first served. Sign up in person at the Gilruth Center and show a yellow EAA badge. Classes tend to fill up two weeks in advance. Payment must be made in full, in exact change or by check, at the time of registration. No registration will be taken by telephone. For more information, call x30304.

EAA badges: Required for use of the Gilruth Center. Dependents and spouses may apply for photo identification badges from 7:30 a.m.-9 p.m. Monday-Friday; and 9 a.m.-1 p.m. Saturdays. Cost is \$10. Dependents must be between 16 and 23 years old.

Hatha Yoga: A stress relieving, stretching and breathing exercise routine to unite body, mind and spirit. Classes meet from 5:30-6:30 p.m. Thursdays. Cost is \$40 for eight weeks.

Nutrition intervention program: A six-week program to learn more about the role diet and nutrition play in health, including lectures, private consultations with a dietitian and blood analysis. Program is open to all employees, contractors and spouses. For more information call Tammie Shaw at x32980.

Defensive driving: One-day course is offered once a month. Pre-registration required. Cost is \$25.

Stamp club: Meets at 7 p.m. every second and fourth Monday in Rm. 216.

Weight safety: Required courses for employees wishing to use the weight room will be offered from 8-9:30 p.m. Feb. 11 and 25. Pre-registration is required. Cost is \$5.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is \$24 for six weeks.

Aikido: Martial arts class meets from 5:15-6:15 p.m. Tuesday and Wednesday. Cost is \$35 per month. New classes begin the first of each month.

Aerobics: Classes meet from 5:15-6:15 p.m. Monday, Tuesdays and Thursdays. Cost is \$32 for eight weeks.

Ballroom dancing: Beginner classes meet from 7-8:15 p.m. Thursdays. Intermediate and advanced classes meet from 8:15-9:30 p.m. Cost is \$60 per couple.

Country and Western dancing: Beginner class meets 7-8:30 p.m. Monday. Advance class meets 8:30-10 p.m. Monday. Cost is \$20 per couple.

Fitness program: Health Related Fitness Program includes a medical examination screening and a 12-week individually prescribed exercise program. For more information call Larry Wier at x30301.

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Dates & Data

Today

Crew briefing: The STS-81 astronauts will discuss their mission at 2 p.m. Feb. 7 in Teague Auditorium. For more information call Helen Harris at x38413.

Cafeteria menu: Special: fried chicken. Total Health: vegetable lasagna. Entrees: pollock hollandaise, beef stroganoff, vegetable lasagna. Vegetables: steamed broccoli, carrots vichy, Italian zucchini, breaded okra.

Monday

Running club meets: The Bay Area Running Club will meet at 7:30 p.m. Feb. 10 at the 2284 Gemini. For more information call Dennis Halpin x36093.

Cafeteria menu: Special: meat sauce and spaghetti. Total Health: potato baked chicken breast. Entrees: wieners and beans, sweet and sour pork chop, potato baked chicken, steamed fish, French dip sandwich. Soup: cream of broccoli. Vegetables: French cut green beans, seasoned rice, California vegetables, buttered beans.

Tuesday

STS-82 launch: The STS-82 mission is scheduled to lift off from Kennedy Space Center at 2:56 a.m. Feb. 11 to service the Hubble Space Telescope.

NPMA meets: The National Property Management Association will meet at 5 p.m. Feb. 11 at Robinette and Doyle Caterers, 216 Kirby in Seabrook. Social and dinner cost \$14. For more information call Sina Hawsey at x36582.

Cafeteria menu: Special: smothered steak with dressing. Total Health: baked potato. Entrees: beef stew, liver and onions, shrimp Creole, baked chicken, fried cod fish, French dip sandwich. Soup: navy

bean. Vegetables: steamed rice, seasoned cabbage, corn O'Brien, peas.

Wednesday

Spaceland Toastmasters meet: The Spaceland Toastmasters will meet at 7 a.m. Feb. 12 at the House of Prayer Lutheran Church. For more information call Jeannette Kirinich at x45752.

Spaceteam Toastmasters meet: The Spaceteam Toastmasters will meet at 11:30 a.m. Feb. 12 at United Space Alliance, 600 Gemini. For details call Pat Blackwell at 282-4302 or Ben Black at 282-4166.

MAES meets: The Society of Mexican American Engineers and Scientists will meet at 11:30 p.m. Feb. 12 in the Bldg. 3 cafeteria. For details call G.D. Valle at x38835.

Astronomy seminar: The JSC Astronomy Seminar will be held at noon Feb. 12 in Bldg. 31 Rm. 129. An open discussion meeting is planned. For more information call Al Jackson at x35037.

PSI meets: The Clear Lake/NASA Chapter of Professional Secretaries International will meet at 5:30 p.m. Feb. 12 at the Holiday Inn, NASA Road 1. Richard Clough of Esselte Corp. will discuss "Filing Without Tears." Dinner costs \$15. For details call Elaine Kemp at x30556.

Cafeteria menu: Special: salmon croquette. Total Health: baked potato. Entrees: roast pork, stir fry, baked perch, steamed fish, vegetable lasagna, Reuben sandwich. Soup: seafood gumbo. Vegetables: mustard greens, okra and tomatoes, vegetable sticks, lima beans.

Thursday

SSQ meets: The Houston Clear Lake Chapter of the Society for Software Quality will meet at 6 p.m. Feb. 13 at the Ramada King's Inn on

NASA Road 1. Lee Norbraten, acting director of the JSC ISO 9000 Office, will discuss JSC's ISO 9000 certification effort. Dinner costs \$12 with advance reservations. For more information and reservations call Renne Peterson at 335-2034.

Airplane club meets: The Radio Control Airplane Club will meet at 7:30 p.m. Feb. 13 at Clear Lake Park Community Bldg. For more information call Bill Langdoc at x35970.

Cafeteria menu: Special: stuffed cabbage rolls. Total Health: baked potato. Entrees: beef tacos, ham and lima beans, pork and beef egg rolls, steamed fish, catfish, French dip sandwich. Soup: beef and barley. Vegetables: Brussels sprouts, green beans, buttered squash, pinto beans.

Friday

Astronomers meet: The JSC Astronomical Society will meet at 7:30 p.m. Feb. 14 at the Lunar and Planetary Institute, 3600 Bay Area Blvd. For more information call Chuck Shaw at x35416.

Cafeteria menu: Special: baked chicken. Total Health: roast beef au jus. Entrees: deviled crab, baked chicken, beef cannelloni, steamed pollock, Reuben sandwich. Soup: seafood gumbo. Vegetables: seasoned carrots, peas, breaded okra, steamed cauliflower.

Feb. 15

NTA meets: The National Technical Association will meet at 10 a.m. Feb. 15 at Texas Southern University School of Technology, Rm. 316. For more information call Pam Denkins at x35272.

Feb. 17

Federal holiday: Most JSC offices will be closed in observance of President's Day.

Swap Shop

Swap Shop ads are accepted from current and retired NASA civil service employees and on-site contractor employees. Each ad must be submitted on a separate full-sized, revised JSC Form 1452. Deadline is 5 p.m. every Friday, two weeks before the desired date of publication. Ads may be run only once. Send ads to Roundup Swap Shop, Code AP2, or deliver them to the deposite box outside Rm. 181 in Bldg. 2. No phone or fax ads accepted.

Property

Rent: El Dorado area condo, 2-2, W/D incl, cov parking, no pets, \$500 dep, \$575/mo. x32972.

Sale/Lease: University Trace Condo, 1 BR plus study, 1 1/3 baths, W/D, cov parking, \$33k, \$525/mo. x48621 or 480-2417.

Rent: Jamaica Beach West Galveston, beach house, 2nd row on beach, great view, all amenities, sleeps 7, winter rates. 488-6796.

Rent: Blackcomb, British Columbia, 2-2 condo, #1 ski resort in NA, W/D, kitchen, heated pool, minutes from ski lift, avail 3-16 to 3-23, 8 days 7 nights, \$200 per night. 998-0659.

Sale: Nassau Bay, Queen's Court Townhouse, 3-2.5-2, \$87.5k. 333-4286.

Sale: Shoreacres, 4-2-2, 1600 sq ft, some repairs in progress. 488-5501.

Rent: Pasadena 3 or 4-1-CP, quiet neighborhood, newly remodeled, refrig, dishwasher, W/D, water/trash paid, no smokers/pets, \$575/mo. x34341 or 339-0231.

Sale: Heritage Park Friendswood, 3-2-2, ex cond, sec sys, ceramic tiles, many upgrades, \$81.9k. 996-0152.

Sale/Lease: Tiki Island, waterfront, 3-2-1 w/boat dock and lift, \$1100/mo or \$112. Phil, x30220 or 337-4168.

Rent: South Lake Tahoe cabin, sleeps 8, 3-2, wood stove, cable TV, VCR, microwave, modern kitchen, W/D, \$85/night. 244-1065 or 326-2866.

Sale: Clear Lake, The Landing, 2-1 condo, \$40k, assume. Walt, x48678.

Cars & Trucks

'85 Chevy Blazer, blue, low mi, good cond, '97 inspection, \$3k. Julia, x40251 or 488-2771.

'90 Plymouth Grand Voyager LE van, 7 passenger, 59k mi, dk blue, wood trim, A/C, auto cruise, loaded, \$6.9k. 286-4774.

'87 Oldsmobile 88, rebuilt engine, silver, auto, A/C, pwr windows, \$3.5k. 286-4774.

'85 Audi 4000S, 4 dr, auto, silver, A/C, AM/FM/cass, approx 60k mi, ex cond, \$3.6k. Bobby, 244-2444 or 488-4382.

'89 Ford Aerostar ext minivan, Eddie Bauer, very clean, \$4.2k. x30912 or 481-2693.

'66 Olds Cutlass, 57k mi, one owner, garaged, needs upholstery and paint, \$2.3k. Paul, x35277.

'82 Ford F-150 XLT Supercab, new camper shell, low mi on new engine and transmission, many new parts, ex cond, \$3,795 obo. x31144 or 992-8170.

'93 Nissan Maxima SE, ex cond, 49k mi, new brakes and Pirelli tires, leather, pwr everything, royal blue, \$12.8k obo. x31444 or 992-8170.

'93 Saturn SL2, loaded, low mi, ex cond, auto, black, \$9.5k. 283-5514 or 286-6941.

'93 Chevy Camaro Z-28, 6 spd, ex cond, warr, 47k mi, CD, pwr locks, seat and windows, cruise, custom wheels, black, \$13.3k. x34544 or 326-3759.

'94 Ford Ranger XLT, 5 spd, 4 cyl, good cond, 60k mi, \$8.9k; '93 Buick LeSabre, 6 cyl, good cond, 44k mi, \$11.7k. 996-1655.

'87 GMC Satari minivan, burgundy, int and tires one yr old, body and engine ex cond, \$4.5k. Teena or Walt, x37787 or 281-422-6369.

'85 Toyota LE van, blue, good cond, \$3k obo. x45004 or 485-1015.

'88 Toyota 4 Runner SR5, 4WD, convertible w/both hard and soft tops, sun roof, cassette, gray, 79k mi, ex cond, \$7.9k. 244-8280.

'90 Honda Accord EX, leather, 4 dr, sun roof, tral, auto, cassette, \$6.5k. 244-8280.

'96 Buick Regal GrandSport, white, 2 dr, w/tpu leather int, CD, all pwr options, dual A/C zones, 16" alum rims, Eagle GT tires, ex cond, \$17.5k. Keith, x35191 or 996-8318.

'92 Chevy Suburban Silverado, loaded, ex cond, white w/maroon int, 120k mi, \$15.1k. Tom, x40048 or 334-2593.

'89 Camaro RS, blk w/red int, T-tops, cruise, pwr locks, auto V6, new tires, 100k mi, clean, runs great, \$4k. Susan, 244-8770 or 409-925-7261.

'94 Saturn SC2, 2 dr, gold, ex cond, 21k mi, 5 spd std, A/C, P/S, AM/FM/cass, upgraded speakers, \$11k. x47693 or 996-0401.

'84 Corvette, white w/red int, 84k mi, loaded, auto, leather, new A/C and many other parts, 2nd owner, \$8.9k. Jeff, x41947 or 281-286-6785.

'86 Chevy S-10 longbed pickup w/camper top, V6 loaded, red w/silver camper, good cond, 146k mi, \$2.4k obo. Gary, x40276 or 281-488-1043.

'81 Chevrolet Silverado, \$3k obo. James, 337-5583.

'93 Ford Ranger XLT, 5 spd, A/C, AM/FM/cass, Oxford white, ex cond, rear sliding window, \$5k. 409-925-4244.

'84 Dodge Prospector van, sleeps 2, mag wheels, stereo, dual A/C, new interior, \$1,950. Rich, x33222 or 538-2870.

Boats & Planes

Outboard engine, 8.0 Hp Evinrude long shaft, \$450. Robert, 334-1677 or 717-8231.

Aluminum prop from 21' Mercruiser I/O 135 hp engine, \$50; tire for boat trailer w/rim, unused, \$50. Robert, x37739.

'93 Crownline 20, Mercury 305 V8, loaded, low hrs, bikini top, custom cover, Shorelander custom trailer, \$13.9k obo. Don, x38039 or 333-1751.

Searay 21' bowrider, 260 hp Mercruiser V8, I/O, new Alpha I O/D, new SS prop, stainless steel hardware, AM/FM/cass/CD, bikini top, full cover, tandem trailer, dry storage, \$7.5k obo. Keith, x35191 or 996-8318.

'89 Maxum 17' bowrider, 85 hp Force O/B, ski rail, galv trailer, custom cover, \$4k obo. Mike, x33898 or 488-0700.

'94 Polaris 750SL 2 seater Wave Runner, ex cond, \$3.7k obo. x31346 or 281-470-7099.

One half ownership in 28' Pearson sailboat, Clear Lake, 3 sails, spinnaker, 30 hp I/B Atomic 4 eng, \$5k plus \$100/mo maint/slip fee. 244-7806 or 538-1681.

'87 Executive Cruiser pontoon boat, 115 O/B, stereo, canopy, power trim, trailer, Hummingbird depth and fish finder, like new, \$6.2k. Rich, x33222 or 538-2870.

'89 Procraft 18' fish/ski boat, 115 hp Mariner motor, galv trailer, unused troll motor, fish finder,

live well, low hrs, \$6.5k. 283-5619 or 488-7616.

Audiovisual & Computers

Low tech modem and CD-ROM. Lee, x47223 or 474-3176.

Computer desk w/hutch, 49W x 24D x 63 tall, ex cond, \$85. 332-3168.

Laptop Austin 486/100MHz, 20MB RAM, 520 MB HD, Windows 95, 14.4 fax/modem, S/W, active color matrix, TFT, \$2k obo. 326-5686.

Arcade style full sz video game, "Wizard or War" w/coin mech, works good, new locks, \$125 obo. Mark, 281-282-6845 or 713-415-9472.

Ten ft dia solid satellite dish and electronics, I.Q. Prism satellite receiver w/descrambler disk, remote arm needs replacement, \$500. Russ, x45989 or 332-1769.

Corner computer workstation w/large dbl hutch, \$120. 996-1655.

Compaq 486/66, 8 MB RAM, 325 MB HD, 28.8 modem, 1.1 VGA, Win 95, MS Office, \$600 obo. 785-0931.

Pioneer KEH-M7500 car radio/cass, detachable face, CD changer controls, \$120 obo. Lisa, x40213 or 992-7302.

Super Nintendo w/2 controllers, 5 games, \$180. x47472 or 488-7743.

New Pentium 100/133/166, \$899/979/1009; DX2-66, \$695; DX4-100, \$745; 386, \$350. Don, x333-1751.

Fujitsu high speed scanner, grayscale, x850 obo; Kodak CD ROM writer, like new, was \$5k, now \$800 obo. x32920 or 992-9203.

Pentiums 100-133-166 MHz, Intel/Viper, 16 MB RAM, 1.2 GB HD, 8X CD, multimedia, 33.6 fax modem w/voice, 14" 28 SVGA monitor, FD, kybd, speakers, mouse, \$1125/1299-1398; 8 MB memory, \$61; 16 MB, \$119; Pentium motherboards 100/133, \$245-349. Ayub, x39199 or 910-6700.

RCA 52" big screen TV, 5 yrs old, was \$2k, now \$1k. James, 337-5583.

Emerson VCR, \$25. Charlie, 480-4046.

486-80DX2 motherboard w/IDE card and VGA card, \$100; 8 MB 60ns RAM, \$50; both for \$125. 244-1250 or 713-721-8670.

Pioneer Premier DEQ-7500 DPS audio processor, \$200; AudioControl EQ Series II dual bandwidth equalizer, \$100. Brian, 996-8567.

Pets & Livestock

Family of 5 society finches w/cage, \$50. Nancy, 996-8567.

Four month old male kitten, black w/white patches, neutered, shots current, \$60. 713-489-4549.

Musical Instruments

Marshall 8011 Valvestate 100W head, 2 channels, effects, loop, reverb, channel/reverb footswitch and manual incl, like new, \$350. Angela, 281-332-7009.

Marshall JCM800 Lead 100W head, modified by James Demeter, 23 channels, effects loop, foot switch, \$750. Angela, 281-332-7009.

Fender acoustic guitar, hard case, electronic tuner, new, \$350. Eric, 281-479-7437.

Yamaha cornet, very good cond, incl case, \$200 obo. Carol, x34182 or 479-7437.

Photographic

Nikon N2000 camera/lens and separate auto/manu-

al flash, like new, \$250; Audio-Technica phono cartridge, new \$15. Ken, 333-7167.

Household

Dark blue sofa, 87", \$100. Tom, x40048 or 334-2593.

Maytag dryer, \$175. 992-6718.

Broyhill sofa, 90", camel-back, ball and claw feet, brocade fabric, like new, \$400. 281-532-1411.

Leather sofa, teal green, 4 yrs old, ex cond, was \$1.5k now \$400. 281-992-0326.

Couch w/qn sz sleeper, \$75 obo; basketball rim and backboard, like new, \$30 obo. Kristin, x41773 or 281-485-7292.

Living room chair, golden harvest color, swivels and rocks, \$40 obo; papasan chair, orange color, \$20. Lisa, x40213 or 992-7302.

Sleeper sofa and love seat, country blue, good cond, \$400. Randy, x48271 or 488-1672.

Super Single water bed, \$100 obo. 488-5416.

Kg sz water bed, heater, mattress, mirror/shelf headboard, \$100 obo; heavy duty rowing machine, \$75 obo. 996-9646.

Secretary, Henredon Historic Natchez series, solid mahogany, no glass, serpentine drawers, 8' tall, 3.5' wide. \$4.4k. 996-0446.

Antique Victorian marble top table, rose-colored marble, 21" x 29", \$650; mahogany corner whatnot, \$275. 996-0446.

Eureka upright vacuum cleaner, \$15; non-electric carpet sweeper, \$15. 480-3424.

Ethan Allen entertainment center, \$600; Bassett living room set w/qn sleeping sofa, \$1.1k; GE refrig, 22.5 cu ft, \$300; Kenmore W/D, \$250/set; oval solid wood table w/ex leaves, 6 chairs, \$900. 996-0152.

Wanted

Want used Seal-a-Meal, working cond. x32996.

Want old Erector sets, 1913-1950, especially sets in wood boxes. Harvey Klein, 713-723-5170.

Want copy of 1997 Golden Globes Awards Show, will pay. 488-3015.

Want witnesses to automobile accident at Saturn and 2nd intersection on Wed, Jan 22, 1997 at about 2:15 p.m. x32046.

Want roommate for 2-2 apartment, Clear Lake area, full sz W/D, amenities, ready to move in Feb/ Mar, \$387.50 + 1/2 utilities. Jennifer, 333-6280 or 286-5639.



NASA Photo STS081-369-003

↑ The *Atlantis* and Mir crews take time out from transferring more than 6,000 pounds of supplies for a crew portrait in Mir's base block. From left are: Mir 22 Flight Engineer Jerry Linenger, STS-81 Commander Mike Baker, Mir 22 Commander Valeri Korzun, Mission Specialists John Grunsfeld, Marsha Ivins, Jeff Wisoff and John Blaha, Pilot Brent Jett and Mir 22 Flight Engineer Alexander Kaleri. Russia and the U. S. are working hard to learn the lessons that will be needed to build the International Space Station.

Mir Memories

STS-81 captures moments of docking, astronaut exchange



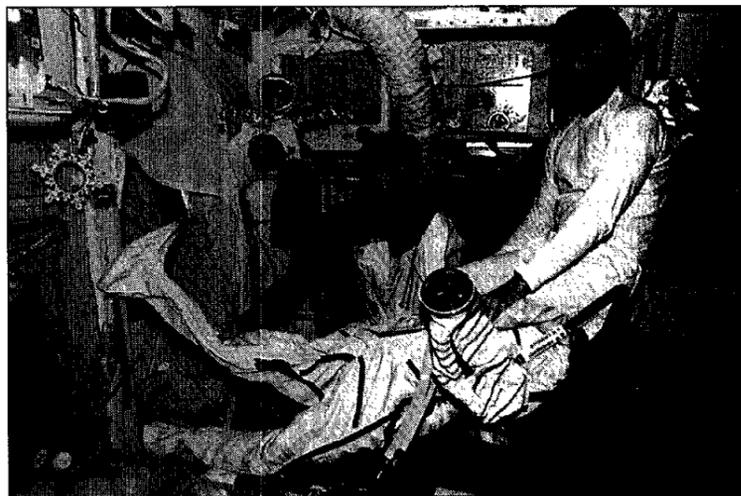
NASA Photo STS081-343-013

↑ Oranges and grapefruit brought up from Earth get a favorable reception by the Mir 22 crew. From left, Wisoff, Grunsfeld and Kaleri watch as Korzun releases the fruit. Fresh food is one the many welcomed transfers STS-81 brought to the cosmonauts.



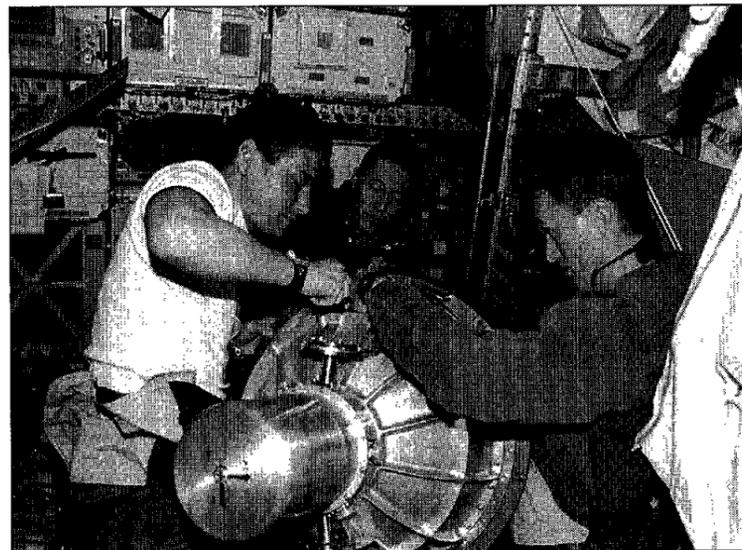
NASA Photo STS081-368-031

↑ Baker watches Jett make a run on the Treadmill Vibration Isolation System aboard *Atlantis*. The International Space Station isolation system under went vibration tests to determine if use of the machine would protect sensitive microgravity experiments.



NASA Photo STS081-372-021

↑ Linenger, with the help of Grunsfeld, checks out his Russian space suit. Linenger will don the suit in March and become the first American to walk in space using Russian hardware. Linenger will attach experiments outside the station so that scientists may better understand the environment in which the station exists.



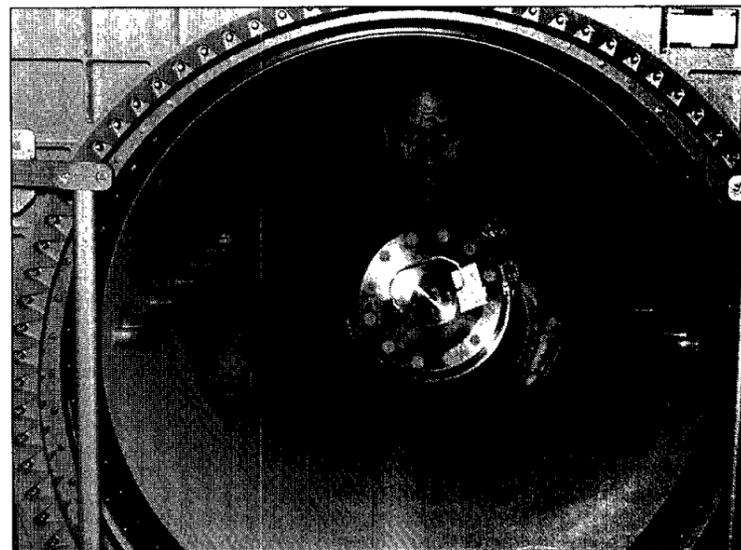
NASA Photo STS081-301-031

↑ From left, Korzun, Baker and Jett unpack a gyrodyne. The device is used for attitude control of the station. The crew worked together for five days until *Atlantis* undocked from Mir at 6:46 a.m. CST Jan. 19 bringing home Blaha and leaving behind Linenger.



NASA Photo STS081-372-037

↑ In Mir's base block Linenger assumes the duties of a Russian flight engineer and checks out his Russian space suit that he will use in March during a space walk. Linenger will remain on Mir until May when *Atlantis* makes its sixth docking on STS-84, when Mike Foale will replace Linenger on the orbiting laboratory.

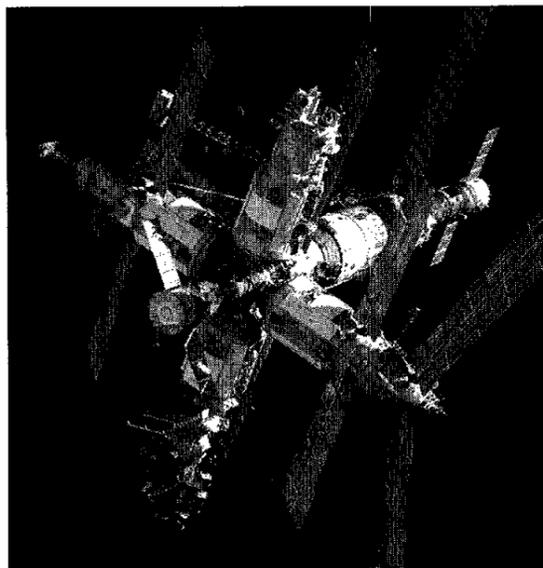


NASA Photo STS081-361-026

↑ Grunsfeld floats with a freezer unit that contains experiment samples into the Spacehab module in *Atlantis*' cargo bay.

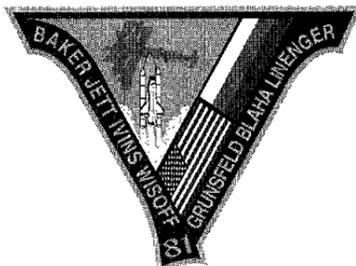
The STS-81 crew captures the Russian Mir Space Station against the blackness of space as *Atlantis* approaches during docking operations. Baker locked the two space craft together at 9:55 p.m. CST Jan. 14 as they streaked over Russia. →

NASA Photo STS081-736-034



NASA Photo STS081-350-013

↑ Members of the Mir 22 crew examine small flashlights brought by the STS-81 crew. From left are Linenger, Korzun, Kaleri, and Blaha. Blaha returned to Earth Jan. 22 after spending 128 days in space—118 days on the Russian outpost. *Atlantis* landed at Kennedy Space Center's Shuttle Landing Facility at 8:23 a.m. CST after completing a 3.8 million mile journey that began at 3:27 a.m. Jan. 12. When Blaha returned to Ellington Field later that week he said that the Phase 1 mission is a "turning point in world history and this Mir-shuttle program is an example of how you can work together with former enemies and do something fantastic."



JSC workers earn top NASA procurement awards

JSC Director George Abbey and Business and Information Systems Director Jane Stearns presented NASA's highest procurement awards to three JSC employees in January.

The annual procurement awards recognize individuals who have made outstanding contributions to procurement efforts throughout the agency. JSC employees were selected in three of eight categories.

Greg Della Longa was selected as Contract Manager of the Year for his ability to tackle agency initiatives in the area of completion

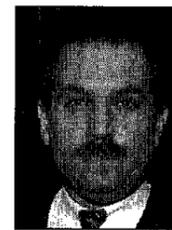
form contracts, while simultaneously managing an already large and diverse workload. Della Longa also developed and led a seminar on completion-form contracting that was attended by more than 800 JSC and contractor management personnel.

Marie Kliment was selected as Small Purchase Specialist of the year for her dedication in managing an extremely heavy workload in processing purchase requests as well as her critical role in the establishment of JSC's BankCard purchasing program.

Randy Gish was selected as Procurement

Supervisor of the Year for his accomplishments in managing the business team for the Space Flight Operations Contract resulting in a timely award of the crucial multi-billion dollar agency contract. According to the nomination, Gish's extreme personal commitment to this effort was paramount to its success.

In personal letters to each award recipient, NASA Associate Administrator for Procurement Dee Lee thanked each of the



Della Longa



Kliment



Gish

winners for their personal commitment and commended their contributions as being critical to accomplishing agency procurement goals.

MCC open to workers during STS-82 mission

The Mission Control Center viewing room will be open for JSC and contractor badged employees and their families during portions of the STS-82 mission.

Employees will be allowed to visit the MCC from 6-8 p.m. Tuesday, 8-12 p.m. Feb. 17, 5-7 p.m. Feb. 18 and 4:30-6:30 p.m. Feb. 19 and 20.

The viewing room will open at 10:30 p.m. Wednesday, Thursday, Feb. 14, 15 and 16 for the Hubble Space Telescope capture and the four space walks. It will remain open on those days as attendance warrants.

Employees must wear their badges and escort family members through the lobby of Bldg. 30 South. Children under five will not be permitted. No flash photography or loud talking will be permitted at any time. Because of the dynamic nature of shuttle missions, viewing hours may be changed or canceled without notice.

For the latest information on the schedule, call the Employee Information Service at x36765.

For information on the mission visit the shuttle home page at: <http://shuttle.nasa.gov>

Workers retire, take bonus across center

(Continued from Page 1)

Lapko, Wayne Low, Nina Maxey, Donna McAllister, Raymond Meraz, Kochetia Morman, Todd Phillips, Laura Pusch, Richard Regenburgh, Maria Salmones, John Smith, Rachel Soria, Clarence Stanley, Jane Stearns, Wallace Stewart, Robin Stuart, Paul Stull, Farris Tabor, Virginia Thompson, James Villarreal, Robert Voigt and Carol Young.

Flight Crew Operations Directorate: Anna Jean Ellis and Wanda Harris.

Mission Operations Directorate: Connie Dunaway, Paula Garza, Georgie Huepers, Michael Jones, Helen Meester, Edward Pavelka and Caroline Qualls.

Engineering Directorate: Jesse Adkins, Paul Brandenberger, Jimmy Cawthorn, Philip Glynn, Georgia Hurst, Paul Kramer, Shirley Newsom, Leon Pringle and Robert White.

Technology Transfer and Commercialization Office: Grady Henderson.

Center Operations Directorate: Robert Bobola, Nita Bouldin, William Clark, Clarke Covington, Cecil Dorsey, Patti Hunter, Joe Olivarez, Shirley Randolph, Maxine Sapp and Julia Watkins.

Office of the Chief Financial Officer: Wilma Bayless, Byron Boeckel, Lucy Heiskala, Dorothy Kirsch, Barbara McClenan and Sheeree Wirt.

Space Shuttle Program Office: Harold Battaglia, Albert Branscomb, Fredrick Burns, David DeAtkine, Jimmie Gibbons, Edwin Hoskins, Ryborn Kirby, William Leverich, Anna Mathews, Richard Mathews, Don McCutchen, David Miao, Wayne Owens, Fredrick Peters, Emmett Shepard and Kenneth Suit.

Safety, Reliability and Quality Assurance Directorate: Carole Boney, Patricia Goldstein, Charles Harlan, Sarah Lai and Bobby Martin.

Space Station Program Office: Arthur Bond, Nelson Brown, Charles Chassey, Josephine Jue, Tony Redding and William Trammel.

White Sands Test Facility: Lynda McNeely and William Waldrip

Space and Life Sciences Directorate: Robert MacDonald and Carmelo Sustaita.

Space Operations: Stephen Bales.

EVA Project Office: Harold McMann.

Phase One Program Office: F.W. Brizzolara.



RODEO DAYS—Rodeo Clown Patrick Kelly helps teach JSC employees how to line dance during lunch at the Bldg. 3 cafeteria last week. Houston Livestock Show and Rodeo volunteers taught line dancing and gave seminars on cowboy folklore while the Lone Star Cowboys entertained with traditional country and western music. The volunteers also spent time at the JSC Child Care Center teaching the children about rodeo life and animals.

JSC Photos 97-01517, 97-01516
by Karen Schmidt and Steve Candler

Mir 23 crew set to launch with German researcher

(Continued from Page 1)

direction you want to go. It is very free and you feel graceful up here."

Linenger describes his days on Mir as pretty normal with the most memorable experience being mornings.

"A big alarm goes off in the morning and it is not unlike the old fashioned clanging alarm," said Linenger. "It definitely wakes you up. We come in, eat some breakfast and then I am off running experiments. I do maybe three or four different experiments a day and go back and check on things. For example, we have a big oven going that is melting metal and I need to check on that periodically throughout the day and look at the data. Twice a day we have to exercise. It is usually on a treadmill or on a bicycle. That is very important to keep bone and muscle strength up. And then you wash up, kind of a sponge bath, with a wet towel. It seems adequate. We have our lunch and dinner together and in the evenings we have a little bit of time, we try to look out the window. It has been spectacular."

Linenger's days have been filled with setting up and activating new experiments.

"On Mir we take the urine we produce and we turn that into water and then we split the water into hydrogen and oxygen," Linenger said. "We use a vacuum pump and pump that overboard and we end up breathing the oxygen. It is a very closed-loop system. I was doing air sampling, I was doing surface sampling, growing some cultures in petri dishes to see how clean the air is and how good the atmosphere is. There are lot of smart people down on Earth that have thought these things out and I am privileged to carry out their work for them."

The Standard Interface Glovebox was installed successfully in the Priroda module on Jan 23. During Linenger's mission, the unit will be used to provide an air-tight, contamination-free work area for plant fixation. The radiation dosimetry investigation was initiated on Jan 29. This experiment uses thermoluminescent dosimeters to characterize

the Mir's radiation environment. The Microgravity Liquid Metal Diffusion experiment is progressing nominally. This experiment evaluates material dynamics in space.

Linenger said working with the Russians now will set the stage for working together on the International Space Station.

"These are the first steps. You have to do things incrementally and this is the first increment," said Linenger. "At this point we are getting pretty good. The shuttle launch that I went up on was flawless. Everything went as planned so the hard work is starting to pay off and I think we can move to the next step with the International Space Station where we start bringing in more and more partners."

In Russia, preparations continue for the scheduled Monday launch of the Mir 23 crew on a Soyuz rocket from the Baikonur Cosmodrome in Kazakhstan. Two Russians and a German researcher will dock with Mir on Wednesday to begin a three-week handover from the current Russian cosmonaut crew. Commander Vasily Tsibliev and Flight Engineer Alexander Lazutkin will join Linenger for their long duration flight, while Korzun and Kaleri prepare to return to Earth on March 2 with German cosmonaut researcher Reinhold Ewald, who will complete three weeks of experiments on Mir. At mid-week, the Mir inhabitants were expected to undock the Progress vehicle to make room for the upcoming Soyuz spacecraft.

Once the Mir 23 crew bids the Mir 22 cosmonauts and German researcher farewell, preparations will begin for the March space walk by Linenger and Tsibliev.

"It should be a great thrill," Linenger said about the space walk. "I have had a lot of training. I am going to be using the Russian suit and go out with one of my Russian colleagues. We are going to be working on the exterior part of the Mir without a vehicle close by. We have to be real careful, similar to a mountain climber, you have to make sure you are always attached should you lose your grip. It should be a great space walk."

NASA calls for software award submissions

NASA's Office of Safety and Mission Assurance, as co-sponsor with NASA's Inventions and Contributions Board, is calling for submissions for the 1997 NASA Software of the Year Award to give recognition to software developed and owned by NASA.

Last year, the competition resulted in nearly \$200,000 being awarded. The winning teams in 1996, Linked Winds Interactive Data System from NASA's Jet Propulsion Laboratory, and Tetrahedral Unstructured Software System from the Langley Research Center, each received a prize of \$40,000.

Information about these and the other finalists from 1996 is available at: <http://www.hq.nasa.gov/office/codei/swy96/win.html>

The award, which will include a trophy, a certificate signed by the NASA administrator, and a monetary award of up to \$100,000, will be presented to authors of software in which NASA has an intellectual property interest, which has been supported, adopted, sponsored, or used by NASA, and which is significant to the NASA mission.

Software programs must have been legally disseminated as commercial-grade, not alpha or beta phase, products to the public by NASA beginning within the last three years.

Entries will be judged by a NASA panel comprised of software development experts from all NASA centers and JPL. After its review, the panel will submit its selection to the ICB. The ICB may recommend a monetary award of up to \$100,000 for the winner depending on the value of the contribution to government and industry. The award will be presented by NASA officials later in the year.

NASA Form 1329, CB Award Evaluation Questionnaire, must be filled out for each entry. Copies of the software, sample applications and data, and descriptive documentation of the package should be included, in addition to evidence demonstrating the impact and degree of innovation and suitability of the entry. This information will be the primary data used by the panel in recommending awards.

Additional inquiries on award criteria should be made through the NASA Space Act Awards Liaison Officer at any NASA center or through the ICB. Center contact names are available by phoning (202) 358-2468. Entries and supporting material must be submitted to these NASA offices no later than April 18. Each center will then forward to the ICB the center's top selection by May 16.

Dietitian to discuss weight control pills

JSC's Total Health Program will sponsor a diet seminar from 11:30 a.m.-12:30 p.m. Feb. 20 in the Bldg. 30 Auditorium.

Doctor of Public Health and Registered Dietitian Rebecca Reeves will discuss "The Truth About Diet Pills." This distinguished scholar and scientist is recognized as an expert in the use of drugs for the treatment of obesity and weight control.

Reeves is the assistant director of the Behavioral Medicine Research Center of the Baylor College of Medicine. She is serving as the coordinator for the American Dietetic Association and previously has served as an editor for the DeBakey Heart Center and the Behavioral Medical Abstracts. She has been a research dietitian, public health nutritionist and clinical dietitian. She has received numerous honors during her career, including Fellow of the American Dietetic Association, Texas Distinguished Dietitian, Who's Who in the South and Southwest, and Outstanding Young Woman of America. Reeves has authored or co-authored 20 publications and has presented more than 30 papers to medical and scientific organizations.

For more information on the seminar call Larry Wier at x30301.